Transforming the Resilience of Cognitive, Cyber-physical Systems

Statement of Themes: Symposia dedicated to promising research in resilient systems that will protect critical cyber-physical infrastructures from unexpected and malicious threats--securing our way of life.

Special/Invite Announcement & Call for Papers

Session S/I-04:

Meta-Network Models for Resilient Interdependent Infrastructures

Session Abstract:

Resilience planning and design need to consider the interdependencies because they are the pathways through which indirect impacts of a disruption ripple through society and the economy. In order to provide a systematic framework for designing resilience for interdependent critical infrastructures (ICIs), this tutorial session aims to introduce a meta-network system framework to capture the physical, cyber and human interconnections within an individual infrastructure and across multiple ICIs to assess their effect on the outcomes of prototypical disastrous events. We will introduce the application of this framework to the discovery of high-risk patterns, the prediction and estimation of resilience, the improvement of resilience, and public policy solutions.

Topics:

- Interdependent Networks
- Resilience Analysis and Design
- Public Policy for Critical Infrastructures

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